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Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the present application:

1. (Currently Amended) A hearing instrument, comprising:

at least one hearing instrument microphone for receiving an audio input signal;
a sound processor for processing the audio input signal to compensate for a hearing impairment and generate a processed audio signal;
at least one hearing instrument receiver for converting the processed audio signal into an audio output signal; and
a serial data port for coupling the hearing instrument to an external device separate from the hearing instrument, the serial data port being operable to ~~transmit~~ communicate bidirectional digital audio signals between the hearing instrument and the external device, wherein the serial data port may be coupled to the external device to transmit at least one of the audio input signal, the processed audio signal and the audio output signal to the external device; and
selection circuitry operable to select at least one of the audio input signal, the processed audio signal and the audio output signal for transmission to the external device via the serial data port.

2. (cancelled)

3. (Currently Amended) A hearing instrument, comprising:

at least one hearing instrument microphone for receiving an audio input signal;
a sound processor for processing the audio input signal to compensate for a hearing impairment and generate a processed audio signal;
at least one hearing instrument receiver for converting the processed audio signal into an audio output signal;

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a serial data port for coupling the hearing instrument to an external device separate from the hearing instrument, the serial data port being operable to communicate bidirectional digital audio signals between the hearing instrument and the external device, wherein the serial data port may be coupled to the external device to transmit at least one of the audio input signal, the processed audio signal and the audio output signal to the external device; and

selection circuitry operable to select at least one of the audio input signal, the processed audio signal and the audio output signal for transmission to the external device via the serial data port. ~~The hearing instrument of claim 2,~~ wherein the hearing instrument is operable to receive a control signal for the selection circuitry, wherein the selection circuitry selects at least one of the audio input signal, the processed audio signal and the audio output signal based on the control signal.

4. (Original) The hearing instrument of claim 3, wherein the control signal is received from the external device via the serial data port.

5. (Original) The hearing instrument of claim 3, wherein the selection circuitry includes a multiplexer.

6. (Currently Amended) The hearing instrument of claim 2~~1~~, wherein the selection circuitry is operable to select at least one additional audio signal from one or more hearing instrument nodes for transmission to the external device via the serial data port.

7. (Original) The hearing instrument of claim 1, wherein the external device is a computer.

8. (Original) The hearing instrument of claim 1, wherein the external device is a computer network.

9. (Original) The hearing instrument of claim 1, wherein the external device is a monitoring

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device.

10. (Original) The hearing instrument of claim 1, wherein the external device is a recording device.

11. (Original) The hearing instrument of claim 1, wherein the external device is a second hearing instrument.

12. (Original) The hearing instrument of claim 1, wherein the serial port may be coupled to the external device to inject an external audio signal into one or more hearing instrument nodes.

13. (Original) The hearing instrument of claim 12, wherein the hearing instrument nodes include an output of the hearing instrument microphone and an output of the sound processor.

14. (Original) The hearing instrument of claim 12, further comprising:

a selection circuitry operable to select at least one of the hearing instrument nodes and couple the serial data port to the selected hearing instrument node for injecting the external audio signal into the selected hearing instrument node.

15. (Previously Presented) A digital hearing instrument configured to be inserted into a patient's ear canal, comprising;

an outer microphone for receiving a first audio signal from outside of the patient's ear canal;

a sound processor for processing the first audio signal to compensate for a hearing instrument and generate a processed audio signal;

a hearing instrument receiver for converting the processed audio signal into an audio output signal to be directed into the patient's ear canal;

an inner microphone for receiving a second audio signal from inside of the patient's ear

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canal; and

a serial data port for coupling the digital hearing instrument to an external device, the serial data port being configured to transmit the second audio signal to the external device.

16. (Currently Amended) The digital hearing instrument of claim 15 wherein the serial data port is further configured to ~~transmit~~ communicate bi-directional audio signals between the hearing instrument and the external device.

17. (Previously Presented) The digital hearing instrument of claim 16, wherein the serial data port is further configured to transmit the first audio signal, the processed audio signal and the audio output signal to the external device.

18. (Previously Presented) The digital hearing instrument of claim 17, further comprising:
a selection circuitry configured to select at least one of the first audio signal, the second audio signal, the processed audio signal and the audio output signal for transmission to the external device via the serial data port.

19. (Previously Presented) The digital hearing instrument of claim 15, wherein the external device is used to monitor sound in the patient's ear canal to assess one or more performance characteristics of the digital hearing instrument.

20. (New) The digital hearing instrument of claim 15 wherein the serial data port is further configured to transmit at least one other signal to the external device besides said second audio signal.

21. (New) The digital hearing instrument of claim 20 further including selection circuitry configured to select between said second audio signal and said at least one other signal for transmission to the external device.

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22. (New) The digital hearing instrument of claim 21 wherein the at least one other signal is the first audio signal or the processed audio signal or the audio output signal.

23. (New) The digital hearing instrument of claim 21 wherein the at least one other signal is the audio output signal.

24. (New) A hearing instrument, comprising:
at least one hearing instrument microphone for receiving an audio input signal;
a sound processor for processing the audio input signal to compensate for a hearing impairment and generate a processed audio signal;
at least one hearing instrument receiver for converting the processed audio signal into an audio output signal;
a serial data port for coupling the hearing instrument to an external device separate from the hearing instrument, the serial data port being operable to transmit first and second digital audio signals between the hearing instrument and the external device; and
selection circuitry operable to select one of the first and second digital audio signals for transmission to the external device via the serial data port.

25. (New) The hearing instrument of claim 24 wherein said first digital audio signal is one of said audio input signal, said processed audio signal, and said audio output signal, and wherein said second digital audio signal is another one of said audio input signal, said processed audio signal, and said audio output signal.

26. (New) The digital hearing instrument of claim 25 wherein the hearing instrument is operable to receive a control signal for the selection circuitry, and the selection circuitry is further configured to select between said first and second digital audio signal based on the control signal.

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27. (New) The digital hearing instrument of claim 26 wherein said external device is one of a computer, a computer network, a monitoring device, and a recording device.